

What is claimed is:

1. A method of enhancing optical characteristics of at least one cell anomaly associated with a tumor, comprising:
 - (a) applying a predetermined contrasting solution to an in-vivo defect area associated with the tumor for optically enhancing the at least one cell anomaly associated with the tumor; and
 - (b) imaging at least a portion of the in-vivo defect area associated with the tumor using a first optical imaging system to provide an in-vivo enhanced tumor image, wherein the in-vivo enhanced tumor image includes the at least one cell anomaly having enhanced attributes.
2. The method of claim 1, wherein applying the predetermined contrasting solution to the in-vivo defect area includes applying an AlCl solution having a predetermined concentration of Al and a predetermined concentration of Cl.
3. The method of claim 1, wherein applying the predetermined contrasting solution to the in-vivo defect area includes applying a solution of AlCl (hexahydrate) 20% w/v in anhydrous ethyl alcohol (S.D. alcohol 40) 93% v/v.
4. The method of claim 2, wherein applying the AlCl solution includes applying an AlCl solution having a concentration ranging from approximately 20% to approximately 40%.
5. The method of claim 2, further including:
 - (c) freezing an excised predetermined layer of the in-vivo defect area associated with the tumor.

6. The method of claim 5, further including:

(d) imaging the excised predetermined layer of the in-vivo defect area associated with the tumor using a second predetermined optical imaging system to provide an ex-vivo enhanced tumor image.

7. The method of claim 6, further including:

(e) comparing the in-vivo enhanced tumor image and the ex-vivo tumor image to investigate the presence of the at least one cell anomaly.

8. The method of claim 1, wherein after step (a), the method further includes:

applying sterile water to the in-vivo defect area for further optically enhancing the at least one cell anomaly.

9. The method of claim 8, wherein after step (a), the method further includes:

applying an optically transparent sterile tape to the in-vivo defect area for sterilizing the in-vivo defect area.

10. The method of claim 1, wherein imaging using the first optical imaging system includes imaging using a confocal microscope.

11. The method of claim 6, wherein imaging using the second predetermined optical imaging system includes imaging using a microscope.